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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,078	09/18/2003	Chong Hin Chee	70020717-1	6786

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AGILENT TECHNOLOGIES, INC.
Legal Department, DL429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

EXAMINER

HUFFMAN, JULIAN D

ART UNIT PAPER NUMBER

2853

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/667,078

Applicant(s)

CHEE, CHONG HIN

Examiner

Julian D. Huffman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification does not provide antecedent basis for the language "determining the dimensions of said print medium from a plurality of images of portions of said edge" found in claim 10. In the specification it is stated that "the size of the paper can be readily ascertained by using the measured positions of the edges". Claim 10 only refers to said edge, or one edge.

Claim Objections

2. Claims 1-4 and 9 are objected to because of the following informalities:

In claim 1, the limitation "said edge" in the second to last line lacks antecedent basis.

Claims 2-4 are objected to as being dependent from claim 1.

In claim 9, the limitation of determining the dimensions of the print medium from a plurality of images of portions of said edge is not clear. It is not clear how the dimensions of the print medium can be determined from images of just one edge.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Endo (US 20040246285 A1).

Endo discloses:

With regards to claim 1, a print mechanism (fig. 2) comprising:

a print head assembly (fig. 2, element 28) comprising a position detector (29) and a marking device (36), said position detector comprising an imaging device for forming an image of a portion of an edge of a print medium (sensor 29 detects various edges of the print medium as shown in fig. 9), said print medium having a top edge, side edges, and a bottom edge (figs. 2 and 9);

an actuator (fig. 2, element 30) for moving said print head assembly relative to said print medium in a predetermined direction (0101); and

a controller (fig. 7, element 54) for determining a location for said edge of said print medium from said formed image (page 7, 0133, Endo determines positions of the leading edge and side edges of the print medium and uses these values to calculate skew and the position of the print media, based on the position, borderless printing

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operations are controlled to eject ink onto the print medium and prevent waste from overspray of ink, see section 0118 and portions thereafter).

With regards to claim 2, the controller determines a brightness value for the print medium from the image (0099, sensor detects intensity of reflected light, which is used by controller to compare the intensity to a known intensity to determine if the paper is being detected, by detecting and determining the intensity of the reflected light, controller determines a brightness value for the print medium).

With regards to claim 3, the controller determines a location for said top edge of said print medium from said image (0133).

With regards to claim 4, the controller determines if said print medium is correctly aligned in said print mechanism by comparing a plurality of edge locations measured at different distances from said top edge of said print medium (0082, figs. 9 and 10).

With regards to claim 5, a method of printing on a print medium having a top edge and side edges (figs. 2 and 9), said method comprising:

forming an image of a portion of an edge of said print medium (figs. 9 and 10, sensor detects leading and side edges of print medium and forms an image thereof);
and

determining a location for said imaged edge of said print medium from said image (at each point of detecting, controller stores the location of detection, 0133).

With regards to claims 6 and 7, said imaged edge is one of said side edges or said top edge (sensor detects leading and side edges).

With regards to claim 8, determining a brightness measure for said print medium (0099, sensor detects intensity of reflected light, which is used by controller to compare the intensity to a known intensity to determine if the paper is being detected, by detecting and determining the intensity of the reflected light, controller determines a brightness value for the print medium).

With regards to claim 9, determining the alignment of said print medium in a print mechanism by comparing a plurality of images of portions of said edge of said print medium (figs. 9 and 10, 0082).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endo in view of Hiramatsu et al. (U.S. 5,168,291).

Endo discloses everything claimed with the exception of determining the dimensions of the print medium from a plurality of images of portions of an edge.

Hiramatsu et al. discloses using a carriage mounted optical sensor to determine the dimensions of print medium from a plurality of images of portions of edges of the print medium (column 5, line 65-column 6, line 4 and column 10, line 21-57).

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It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize a sensor to determine the width of the media by forming images of portions of edges, as taught by Hiramatsu et al. into Endo, for the purpose of providing a means to determine the width of the print media using a device which does not require various sensors and which facilitates servicing and assembling operations (column 3, lines 3-11).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (571) 272-2147. The examiner can normally be reached on 9:30a.m.-6:00p.m. Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


9 July 2005


K. FIGGINS
PRIMARY EXAMINER